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M O R T G A G E M A R K E T T R E N D S

THE RISKS OF RISING INTEREST RATES

Research & Analysis
Office of Thrift Supervision
Washington, DC

INTRODUCTION•

Mortgage interest rates have risen sharply since their seven-year low last October. This rapid rise in rates has created a series of challenges to those who serve the mortgage market. As rates rise, refinancing and home purchase mortgage demand tends to fall, as new mortgages are now more expensive for borrowers. Falling demand squeezes an industry that had just ramped up to meet 1998's record demand for $1.44 trillion worth of mortgages. Layoffs and lower underwriting standards are just two of the ways squeezed mortgage originators can respond to a tighter market. The Mortgage Bankers Association, for example, predicts that 75,000 jobs in the industry will be lost over the next twelve months. The mortgage industry experienced a similar reduction in demand in 1995 due to rising rates following a refinancing boom. Mortgages originated during that squeeze have performed poorly, suggesting that underwriting standards were lowered in an effort to maintain volume. While it is too early to tell for this year's cohort, the recent decline in origination activity suggests that another squeeze is underway.

Rising interest rates also make adjustable-rate mortgages (ARMs) a more attractive alternative to fixed-rate mortgages (FRMs) for borrowers. Product demand will now favor ARM originators, such as thrifts, over those who specialize more in FRMs, such as mortgage bankers.

Rising short-term interest rates trigger increases in adjustable-rate mortgage rates as the ARMs reprice. Higher mortgage interest rates result in higher monthly payments. This puts additional pressure on borrowers, making delayed mortgage payments or defaults more likely.

In addition to examining the effects of rising interest rates, we will briefly cover one other mortgage market development in this issue. The Mortgage Partnership Finance© plan sponsored by the Federal Home Loan Bank of Chicago posed an interesting issue concerning the appropriate capital treatment of second-dollar credit loss guarantees issued by the participating banks or thrifts.[1] OTS and the other banking agencies have recently issued a letter detailing the conditions under which such guarantees would be afforded lowered capital requirements. The directive given by the agencies signals a heavier reliance on a credit-ratings approach in setting capital standards and gives some indication as to the agencies' current thinking about risk-based capital requirements. But before we get started, let's look at the mortgage market conditions over the first half of 1999, as this issue will cover two quarters rather than just one.

• Prepared by Fred Phillips-Patrick, Jonathan Jones, and John LaRocca, Research & Analysis Directorate, Office of Thrift Supervision. Please email any comments or questions to fred.patrick@ots.treas.gov.

[1] See *Mortgage Market Trends*, Volume 3, Issue 1, for a discussion of the program.

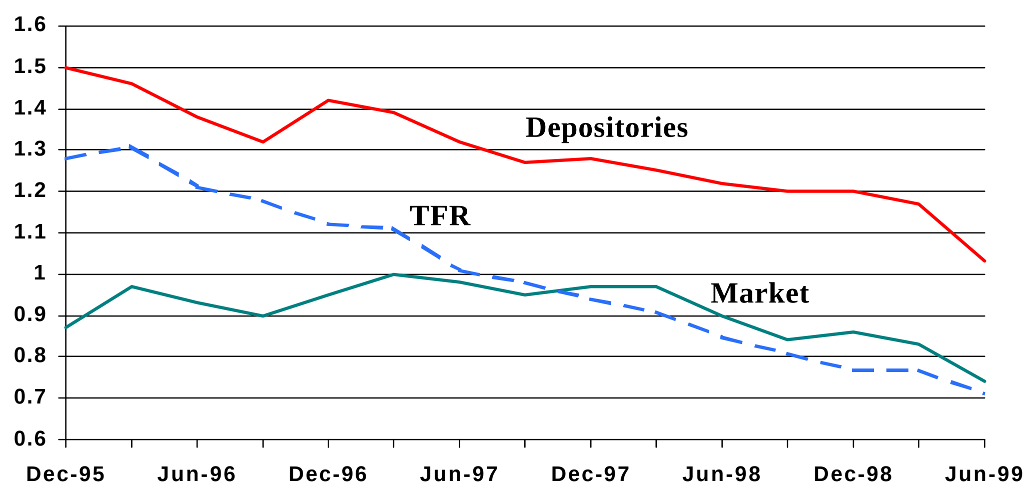
CURRENT MORTGAGE MARKET CONDITIONS

National Delinquency Rates Decline Even Further

Figure 1 plots the percentage of seriously delinquent (90 days past-due or in foreclosure) residential mortgages, using both the Mortgage Information Corporation (MIC) and Thrift Financial Report (TFR) data. The MIC data comprise almost 24 million mortgages. Since the first issue of the *Mortgage Market Trends*, we have divided the MIC data into two groups: the market, which includes all MIC participants (Freddie Mac, Fannie Mae, and eighteen other large banks, thrifts, and private mortgage lenders), and a subgroup, depository institutions, which includes only the FDIC-insured MIC participants (a mix of S&Ls and commercial banks). As the trend line in Figure 1 shows, the national delinquency rates have fallen since the end of 1998, with especially sharp declines in the second quarter of 1999. The OTS-regulated (TFR) thrift delinquency rates continued to decline, a trend that started in March 1996.

Figure 1 also shows that depositories, as a group, have had a higher delinquency rate than the national average for the entire period. The gap between the depository and the market delinquency rates has remained fairly constant since June 1997. The thrift industry, though, has improved its performance so much over the last few quarters that its delinquency rate has dropped **below** the MIC national rate (which is dominated by the GSEs' portfolio of conforming mortgages) for the last six consecutive quarters.

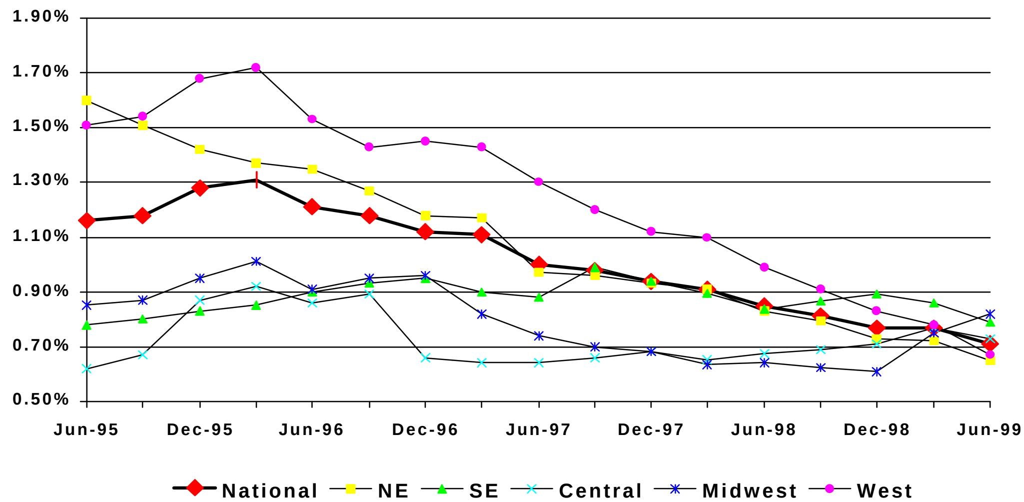
Figure 1: Percentage of Seriously Delinquent Mortgages



Source: MIC and TFR. The *Market* contains the combined data of the depository and non-depository participants in MIC's Loan Performance System. *Depositories* comprise both bank and thrift MIC participants. The thrift MIC participants are very large institutions located primarily on the East and West coasts. *TFR* represents all OTS-regulated institutions except one that specializes in defaulted mortgages.

Figure 2 shows the regional detail behind the improvement of the overall OTS delinquency rate. The Northeast and West regions continued to improve, and for the first time since we've been tracking the data the Northeast has the lowest rate of seriously delinquent mortgages among all five regions. The Midwest region's performance deteriorated over the last two quarters, going from best performance to the worst. All regions have very low rates, however. Moreover, the reduction in regional disparities is beneficial from a supervisory perspective.

Figure 2: OTS Regional Delinquency Rates



Hawaii, Maryland, and DC have highest delinquency rates

In June 1999, according to the MIC data, the states with the highest rates of seriously delinquent loans (by dollar value) were Hawaii (1.73%), Maryland (1.57%), District of Columbia (1.49%), New Jersey (1.29%), New York (1.28%). The national average was 0.74%. California, which has previously drawn national attention because of its poor performance, had a rate of 0.73%, below the national average. Iowa (0.21%) and Nebraska (0.19%) had the lowest rates.

In individual markets, Memphis, TN, with a seriously delinquent rate of 1.89%, led the nation. It was followed by Scranton, PA (1.85%), and Riverside, CA (1.83%). Among major markets, Miami was fifth worst, with a rate of 1.63%. New York was twelfth with a rate of 1.31%. San Francisco, with a rate of 0.16%, had the lowest seriously delinquent rate in the nation.

Table 1 shows the percentage of mortgages that are seriously delinquent for different product types (conventional and government-backed, fixed rate and adjustable) based on whether the mortgages were made for purchase or for refinancing. These data show that fixed rate mortgages outperform adjustable rate mort-

Table 1: Percent Seriously Delinquent, as of 6/99

	Home Purchase	Refinancing
Conv: Fixed Rate	0.48	0.19
15-Yr Fixed	0.16	0.08
30-Yr Fixed	0.53	0.25
Conv: Adj Rate	0.92	0.69
T-Bill	0.86	0.59
COFI	1.02	1.07
Government	3.17	1.43
FHA	3.40	1.29
VA	2.72	1.62
All Loans	0.95	0.31

Source: MIC, based on $ amounts

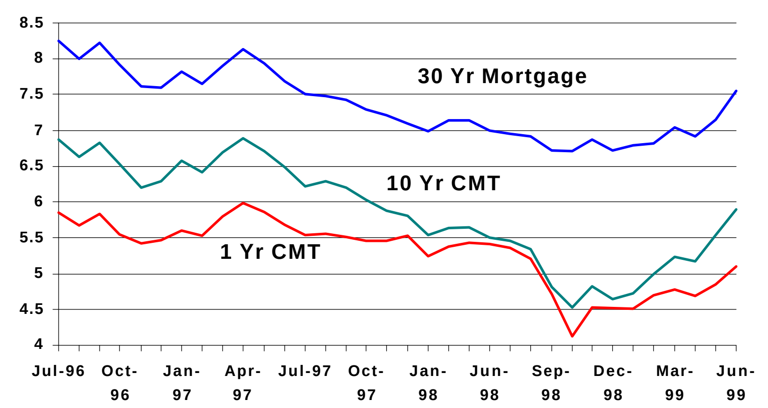
gages; fifteen-year fixed rate mortgages outperform thirty-year mortgages. Refinanced mortgages perform much better than home purchase mortgages in all cases except one, COFI ARMs, where the refinanced mortgages have a slightly higher delinquency rate than COFI ARM home purchase loans. Delinquency rates on government-backed loans substantially exceed those on conventional loans. For home purchase mortgages, government-backed loans have a seriously delinquent rate five times higher than that for thirty-year conventional loans (3.17 vs. 0.53); for refinancing loans, the rate is also five times higher (1.43 vs. 0.25).

INTEREST RATES RISE RAPIDLY

Interest rates have risen quickly and sharply since their seven-year lows reached last October. Figure 3 depicts the movement of key interest rates since January 1996.

The 1 year constant maturity Treasury rate (1 Yr CMT) is frequently used as an index for adjustable rate mortgages. The 10 year constant maturity Treasury rate (10 Yr CMT) serves as an overall risk-free reference rate for longer-term contracts. The FHLMC 30-day commitment rate for thirty-year fixed rate conforming mortgages provides a commonly used mortgage rate benchmark.

Figure 3: Interest Rates Since July 1996



During the period July through October last year domestic and worldwide events prompted a flight to safety that drove down Treasury rates sharply. Mortgage rates also fell but not nearly as much. Thus, the spread between Treasury rates and mortgage rates widened in the third quarter, even as mortgage rates declined. The rates rose in November, declined slightly in December, but have climbed sharply since then.

Last year's rapid decline in interest rates prompted many to refinance into fixed rate mortgages, especially in the second half of the 1998. But since the beginning of this year, the rapid rise in rates, especially long rates, have made adjustable-rate mortgages much more attractive. The 10-year CMT has increased 137 basis points from its October low. The FLHMC 30-day commitment rate for 30-year mortgages has also risen 84 basis points, from 6.71% at the end of October to 7.55% at the end of June. The spread between the 1-year CMT and 10-year CMT rates, which during much of 1998 was extremely narrow, has widened to more normal proportions during the first half of 1999. As a result, ARMs have become much more popular, as can be seen in their market share of originations detailed in the next section.

Interest Rate Rise Prompts ARM Resurgence

The Federal Housing Finance Board conducts its *Mortgage Interest Rate Survey* (*MIRS*) monthly among mortgage lenders on the interest rates and terms of their recently closed conventional (non-government-backed) mortgages. Table 2 reports these survey results for the months ending each quarter over the last eighteen months.

Table 2 shows that, for all three lender groups, effective mortgage interest rates (which include the amortization of initial fees and charges over a ten-year period) have risen sharply since the forth quarter of 1998. For S&Ls, the current average is 6.75%, for commercial banks, 7.26%, and for mortgage companies, 7.39%. The average effective interest rate was substantially lower for S&Ls than that for the commercial banks and mortgage companies in every quarter surveyed.

Table 2: Mortgage Rates and Terms
(Conventional Home Purchase Mortgages)

	Effective Rate	Percent of Loans by LTV Class				% Arms
		< 70	70-80	80-90	>90	
S&Ls						
Dec-97	7.05	25	48	13	14	45
Mar-98	6.96	24	46	14	16	36
Jun-98	6.90	25	47	13	15	39
Sep-98	6.72	26	47	12	15	35
Dec-98	6.61	30	43	12	14	31
Mar-99	6.70	27	45	14	15	40
Jun-99	6.75	25	46	15	14	52
Commercial Banks						
Dec-97	7.46	18	32	16	35	9
Mar-98	7.22	15	34	16	36	9
Jun-98	7.21	15	31	14	40	9
Sep-98	7.01	17	34	17	33	7
Dec-98	6.96	15	38	16	30	8
Mar-99	7.09	17	35	13	34	9
Jun-99	7.26	22	41	14	22	24
Mortgage Companies						
Dec-97	7.51	19	36	17	27	8
Mar-98	7.28	20	37	17	27	6
Jun-98	7.29	19	37	16	28	7
Sep-98	7.11	19	36	16	28	4
Dec-98	7.00	20	38	16	26	4
Mar-99	7.07	21	39	15	25	5
Jun-99	7.39	19	40	15	26	9

Source: Mortgage Interest Rate Survey, Federal Housing Finance Board

The widening difference between the 1-year and 10-year interest rates over the first half of 1999 affected ARM originations. S&Ls have traditionally originated a higher proportion of ARMs than either commercial banks or mortgage banks, and this pattern persists. While more than half of S&Ls originations are typically ARMs, the ARM percentage had fallen to just 31% in December, but as of June 1999, it had rebounded to 52%. At commercial banks, the increase in ARM originations has been even more dramatic, tripling from 8% at yearend to 24% at the end of June. Mortgage companies' ARM originations almost doubled from 5% at yearend to 9% now.

The distribution of originations by loan-to-value ratios likely affected differences in the effective interest rates between S&Ls and commercial banks and mortgage companies. Over the last year and a half, S&Ls have originated a much smaller percentage of their loans in the highest LTV category (greater than 90% LTV ratio) than the other two originators. Over the second quarter of 1999, commercial banks originated a lower percentage of high LTV loans, dropping from 34% in March to only 22% in June. Both the higher proportion of ARMs and the lower proportions of higher LTV loans help explain the lower effective mortgage interest rates seen here.

ARM Delinquencies Rise as Rates Reset

Recent increases in interest rates have brought about a sharp decline in the refinancing of residential mortgages. The flat and relatively low yield curves that prevailed during much of 1998 generated enormous refinancing activity, characterized by homeowners switching from ARMs into 30-year fixed-rate mortgages. As the 30-year mortgage rate has increased during recent months, adjustable-rate mortgage originations have increased and fixed-rate originations have fallen off sharply.

Financial institutions can lower their interest rate risk exposure by holding more ARMs in their portfolios. However, on the negative side, greater holdings of ARMs expose institutions to greater credit risk because delinquency rates are typically higher for adjustable-rate mortgages, especially as interest rates rise and ARMs reset at higher rates.

Recent trends in delinquency rates show a rise in ARM delinquencies, even while FRM delinquencies have fallen. Table 3 reports the spread in market and depository seriously delinquent rates between fixed- and variable-rate mortgages over the last year using the MIC database. Between June 1998 and June 1999, the delinquency rate for fixed-rate mortgages has fallen for both the market and depositories. Over the same period, the delinquency rates for ARMs have risen. Thus, the gap between the delinquency rates on fixed- and adjustable-rate mortgages widened substantially for both groups of originators. The increasing gap between FRM and ARM delinquency rates is consistent with the effect of upward shocks in interest rates as coupons on adjustable-rate mortgages are reset, driving monthly mortgage payments upward. It is also consistent with deterioration in the credit quality of the remaining ARM portfolio, as many ARM borrowers who could qualify for a fixed-rate mortgage would have refinanced when FRM rates were so low in 1998.

Table 3: Spread Between Seriously Delinquency Rates of Variable-Rate Mortgages and Fixed-Rate Mortgages

	Jun-98	*Dec-98*	*Mar-99*	*Jun-99*
	Spread			
Market	0.78	1.07	1.13	1.07
Depositories	0.18	0.40	0.46	0.48
	Level			
Market FRM	0.88	0.85	0.82	0.74
ARM	1.66	1.92	1.95	1.81
Deposit. FRM	1.40	1.39	1..36	1.20
ARM	1.58	1.79	1.82	1.68

*Percentages based on number of loans.

Table 4 reports seriously delinquent rates for adjustable-rate mortgages for high-LTV categories. Delinquencies rise dramatically as the loan-to-value ratio goes up. Recently, savings association and banking regulators issued supervisory guidance recommending caution in the origination and holding of high-LTV and subprime loans, in part because of the particularly high delinquency rates when LTVs exceed 95%. The results reported in Table 4 show both the impact of rising ARM reset rates and ARM pool credit deterioration, as those borrowers who could qualify for refinancing often did so into fixed-rate mortgages, leaving behind a greater concentration of poorer quality ARM loans. Delinquencies on high-LTV adjustable-rate mortgages increased substantially between December 1997 and June 1999. These results support the notion that risk factors compound, rather than just add. These results also strongly suggest that institutions should carefully consider the trade-off between interest rate risk and credit risk when deciding whether or not to hold high-LTV ARM mortgages in portfolio.

Table 4: Seriously Delinquent Rates for High LTV Mortgages (Fixed-Rate Mortgages Only)

	December 1997		*June 1999*	
	91-95	96-105	91-95	96-105
Market	1.31	3.19	1.23	2.76
Depositories	1.69	3.20	1.71	3.01

*Percentages based on number of loans.

Table 5 shows the seriously delinquent rate for fixed-rate mortgages over the same time period. As can be seen, the seriously delinquent rate either declined (for those mortgages in the 96-105% LTV range) or stayed about the same (for the mortgages in the 91-95% LTV range) over the refi and recent interest rate rise period. This improvement reflects, in part, the infusion of recently underwritten and refinanced fixed-rate mortgages. It should also be noted that almost all first time home buyer “affordable housing” programs, such as those of Fannie Mae and the Neighborhood Housing Services affiliates of the Neighborhood Reinvestment Corporation, involve only fixed-rate loans, which these two tables show pose substantially less risk than adjustable-rate loans in the current environment.

Table 5: Seriously Delinquent Rates for High LTV Mortgages (Variable-Rate Mortgages Only)

	December 1997		*June 1999*	
	91-95	96-105	91-95	96-105
Market	2.01	4.09	2.66	5.95
Depositories	2.08	4.27	2.74	6.14

*Percentages based on number of loans.

Interest Rate Risk Increases

Last year’s mortgage refinancing activity brought about a dramatic change in the asset portfolio composition of thrifts. Homeowners switched from adjustable-rate mortgages into longer-term fixed-rate mortgages, especially 30-year mortgages, to take advantage of last year’s historically low 30-year mortgage rates. As a result, thrifts now hold proportionately more 30-year fixed-rate mortgages in their portfolios. This makes thrifts more sensitive to interest rate increases. The June 1999 issue of the *Quarterly Review of Interest Rate Risk*[2] shows that the change in sensitivity and the type of mortgage portfolio holdings are closely related. Those thrifts with the largest sensitivity increase between the first and second quarters of this year also held substantially greater proportions of their assets in long-term 30-year fixed-rate mortgages and mortgage-backed securities.

Median sensitivity for the thrift industry rose almost 28 percent between the first and second quarters of this year. This substantial increase continues a significant upward trend in the industry's aggregate sensitivity for the third consecutive quarter. The median sensitivity had been steadily declining since it last peaked at 201 basis points in March 1997. The second-quarter level of 182 basis points for sensitivity places it at about the same levels that prevailed in June 1996 and December 1994.

These aggregate results for the second quarter on the surface do not appear to be of immediate supervisory concern when viewed historically. However, the number of thrifts with a very high sensitivity measure almost doubled to 73 in the second quarter. Among these are 21 of the largest thrifts, each with assets that exceed $1 billion. The number of thrifts with post-shock net portfolio values ratios (a measure of interest rate exposure) below 4 percent rose to 25, up from 13 in each of the previous two quarters.

Based on guidance provided in Thrift Bulletin 13a, the number of thrifts that might initially be considered to bear "significant" or "high" interest rate risk increased from 71 thrifts (8.6 percent) at the end of the first quarter to 119 thrifts (11.8 percent) by the end of the second quarter. This rise in interest rate risk among thrifts makes capital adequacy a supervisory concern.

Thrifts have several means of managing interest rate risk. The recent shift in product demand towards ARMs will naturally tend to reduce interest rate risk as ARMs are added to portfolios. Innovations such as the Chicago Federal Home Loan Bank's Mortgage Partnership Finance (MPF) plan offers thrifts an opportunity to shift interest rate risk to the Chicago FHLB, while retaining a portion of the mortgage's credit risk. The MPF raised some interesting capital issues, which the banking agencies recently addressed. This is the subject of the next section.

MPF CAPITAL REQUIREMENTS

In July 1999, the banking agencies released additional guidance on the risk-based capital treatment of the credit enhancement provided by banks and thrifts participating in the Federal Home Loan Bank of Chicago's (FHLB-C) Mortgage Partnership Finance (MPF) program. Under the MPF program, a participating financial institution (PFI) acts as an agent for FHLB-C, underwriting, servicing, and providing a second-dollar loss credit enhancement for residential mortgages, for which it receives fees. Under the plan, interest rate risk is transferred to the Chicago FHLB. Regulators are concerned about the credit risk of the credit en-

[2] Available online at www.ots.treas.gov

hancement supplied by the insured bank or thrift, and what the appropriate amount of risk-based capital should be.

The structure of the MPF plan requires the Chicago Federal Home Loan Bank to provide a first-dollar loss protection cushion equal to 100 basis points of the total mortgage pool's initial unpaid balance. The PFI provides a second-dollar loss enhancement that varies with the credit quality of the mortgage pool supplied by the PFI. It is sized so that the senior piece held by the Chicago Federal Home Loan Bank would have the credit quality equivalent to a bond "AA" rating. With a good quality mortgage pool, the second-dollar loss position would generally not exceed three percent of the original unpaid balance of the mortgage pool.

With the 100 basis point first-dollar loss position protecting it, what would be the credit risk of the enhancement supplied by the bank or thrift? Using an approach similar to that used by the rating agencies, the credit risk of the enhancement was analyzed as if it were a mezzanine tranche in a securitization structure. In other words, the enhancement was analyzed as if it were a separate security that represented a claim on the cash flows of the mortgage pool, junior to the senior piece held by the Chicago Federal Home Loan Bank, but senior to the 100 basis point cushion provided by the Bank. Analysis showed that for most pools the enhancement would garner at least the equivalent of a "BB" rating, and for many pools, a "BBB" rating.

Given that the enhancement would be rated investment grade for many of the pools, the banking regulators determined that the enhancement could be treated for capital purposes similar to other investment-grade assets, that is, placed in the 100 percent risk bucket and assessed 8% capital. The banking agencies notified the Chicago Federal Home Loan bank that the enhancement would be treated for risk-based capital purposes as a direct credit substitute. As such, a financial institution would be required to use a 100 percent conversion factor to convert the **face amount** of the enhancement to an on-balance sheet credit equivalent amount, which then would be assessed 8% capital. The PFI's enhancement would **not** be treated as recourse and thus be subject to a capital requirement based on the size of the asset pool that it supports. Rather, the enhancement would be treated as a direct credit substitute, such as a standby letter of credit, and its capital requirements would thus be based only on the enhancement's face value and not the size of the asset pool it supports. This approach looks to the actual credit risk of the position, rather than to the position of the enhancement in the securitization structure.

CONCLUSION

Rising interest rates can have powerful effects on an industry such as ours. Product demand can change rapidly; it now favors ARM originators. Overall product demand can fall, challenging originators to maintain volume without sacrificing quality. The huge 1998 refinanced cohort held by thrifts, predominately 30-year fixed rate mortgages, now has less value because of the rise in interest rates. Moreover, these mortgages are less likely to prepay. As ARMs are reset at currently higher rates, defaults and delinquencies become more likely. But innovative products and programs, such as the MPF, offer new ways to separate and manage interest rate risk and credit risk. Such is the staid world of mortgage lending.

Mortgage Market Trends

Volume 3 Issue 3

November 1999

Data Appendix

National and Regional Trends in Mortgage Delinquency Rates

For the Quarter ending:

March 31, 1999

Regional and State Analysis

Seriously Delinquent & Home Price Appreciation Rates as of 3/31/99

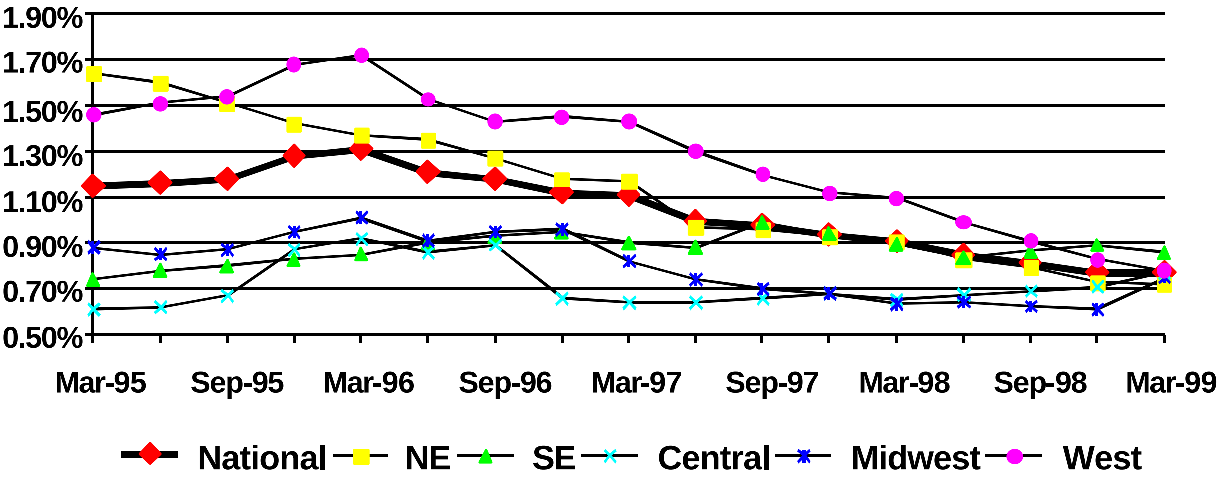
(Based on $)

	MIC SD		TFR SD	Home Price Appreciation	
	Market	Depositories	TFR	1-Year	5-Year
National	**0.83**	**1.17**	**0.77**	4.8	20.7
Northeast	**1.06**	**1.54**	**0.72**		
Connecticut	0.81	1.00	0.49	4.33	8.62
Delaware	0.86	1.55	0.47	3.47	8.89
Maine	0.65	1.15	0.77	4.84	13.20
Massachusetts	0.47	0.67	0.36	8.47	23.73
New Hampshire	0.40	0.71	0.53	7.46	18.11
New Jersey	1.42	2.23	1.13	4.22	10.43
New York	1.42	1.79	0.62	5.31	10.81
Pennsylvania	1.02	1.70	0.87	3.12	10.75
Rhode Island	0.65	0.88	1.22	3.03	5.89
Vermont	0.37	0.77	1.05	2.36	7.97
West Virginia	0.62	1.92	1.06	4.19	23.41
Southeast	**1.03**	**1.54**	**0.86**		
Alabama	0.70	1.62	1.01	4.25	24.05
DC	1.60	2.00	2.81	4.43	6.58
Florida	1.20	1.51	0.70	4.00	17.48
Georgia	0.85	1.38	0.76	6.50	28.16
Maryland	1.73	2.56	2.50	2.59	7.72
North Carolina	0.61	1.04	0.43	4.41	27.95
Puerto Rico	0.72	2.07			
South Carolina	0.67	1.18	0.48	6.02	25.98
Virginia	0.76	1.14	0.39	3.34	11.64
Central	**0.62**	**1.28**	**0.77**		
Illinois	0.87	1.38	0.79	3.59	19.15
Indiana	0.72	1.61	0.95	4.35	26.40
Kentucky	0.50	1.07	0.89	4.99	27.20
Michigan	0.24	0.54	1.07	6.51	41.16
Ohio	0.65	1.34	0.59	4.93	26.78
Tennessee	0.97	1.97	0.70	4.82	30.45
Wisconsin	0.28	0.68	0.29	4.79	29.82
Midwest	**0.57**	**0.96**	**0.75**		
Arkansas	0.94	1.65	1.87	3.37	21.45
Colorado	0.33	0.52	0.13	6.57	39.98
Iowa	0.24	0.39	0.38	5.09	27.43
Kansas	0.46	0.82	0.31	5.46	29.27
Louisiana	0.97	1.70	0.32	4.85	27.90
Minnesota	0.32	0.50	0.28	6.07	30.18
Mississippi	0.74	2.21	0.84	4.75	25.58
Missouri	0.47	0.86	0.42	4.66	24.68
Nebraska	0.23	0.31	0.70	4.15	29.87
New Mexico	0.78	1.15	0.83	2.80	21.95
North Dakota	0.34	0.51	0.34	3.16	23.62
Oklahoma	0.75	1.29	0.24	4.89	22.12
South Dakota	0.39	0.60	0.53	3.30	24.62
Texas	0.76	1.20	1.25	4.18	15.41
West	**0.80**	**0.88**	**0.78**		
Alaska	0.46	1.21	0.00	3.68	19.88
Arizona	0.57	0.77	0.53	5.29	29.05
California	0.85	0.91	0.86	8.62	12.53
Hawaii	1.85	2.67	1.72	-0.19	-11.31
Idaho	0.68	0.85	0.17	2.91	24.10
Montana	0.63	1.25	0.31	2.41	28.05
Nevada	1.23	1.40	1.89	2.17	14.96
Oregon	0.38	0.38	0.21	3.36	41.13
Utah	0.70	1.01	1.06	4.06	49.23
Washington	0.55	0.55	0.25	6.41	25.71
Wyoming	0.41	0.64	0.53	1.38	27.17

OTS Regions

Seriously Delinquent Mortgages (%)

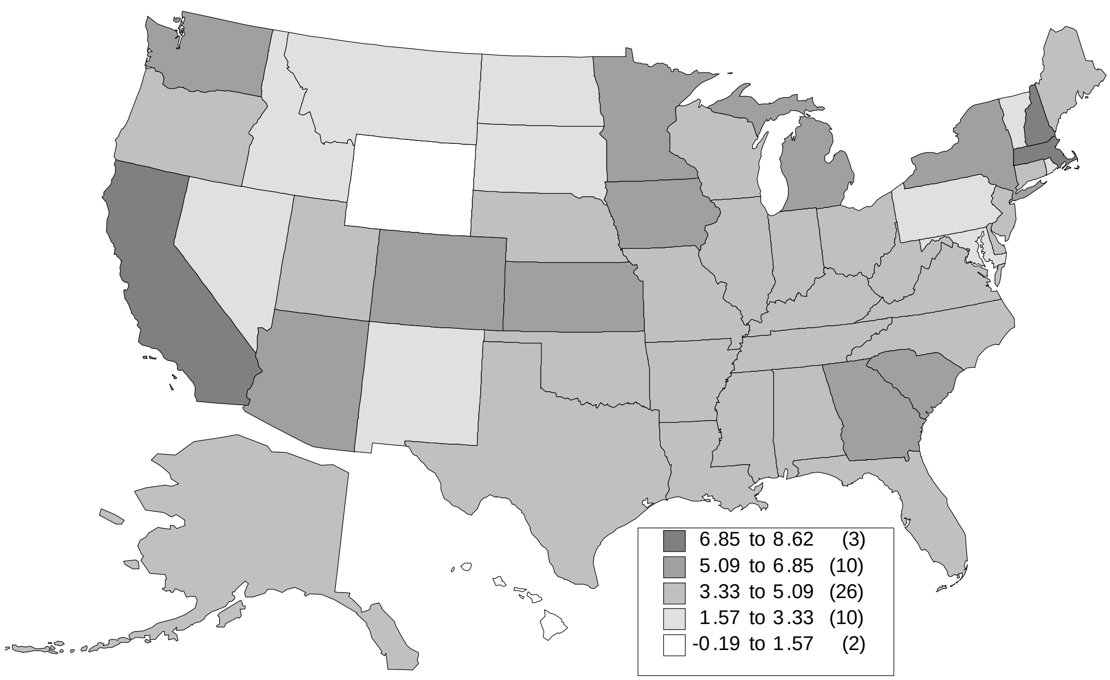
Based on Thrift TFR Data by Location of Headquarters



Percent Home Price Appreciation

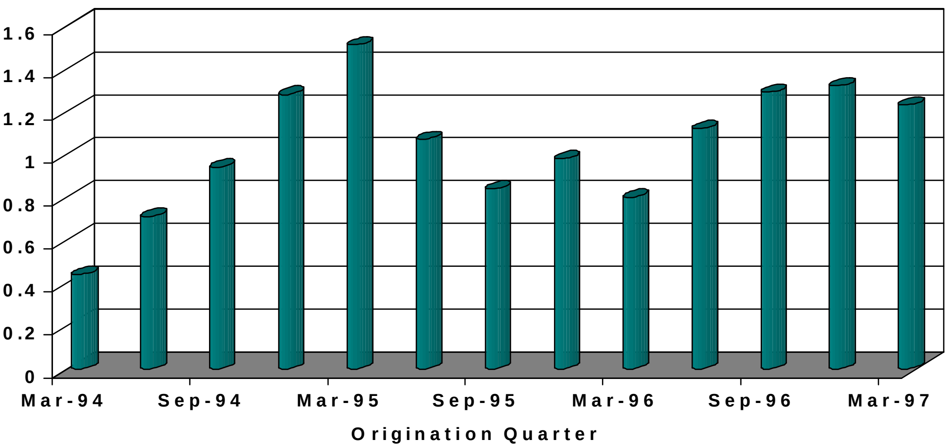
1998Q1 to 1999Q1

(Source: OFHEO Resale Database)



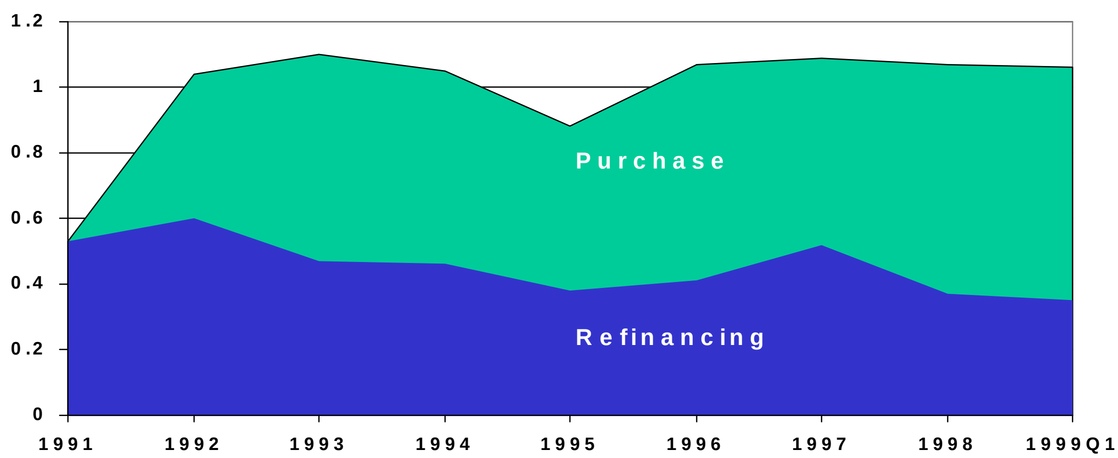
National Cohort Performance by Quarter of Origination

(Source: MIC, Percent Seriously Delinquent after 24 Months, All Loans)



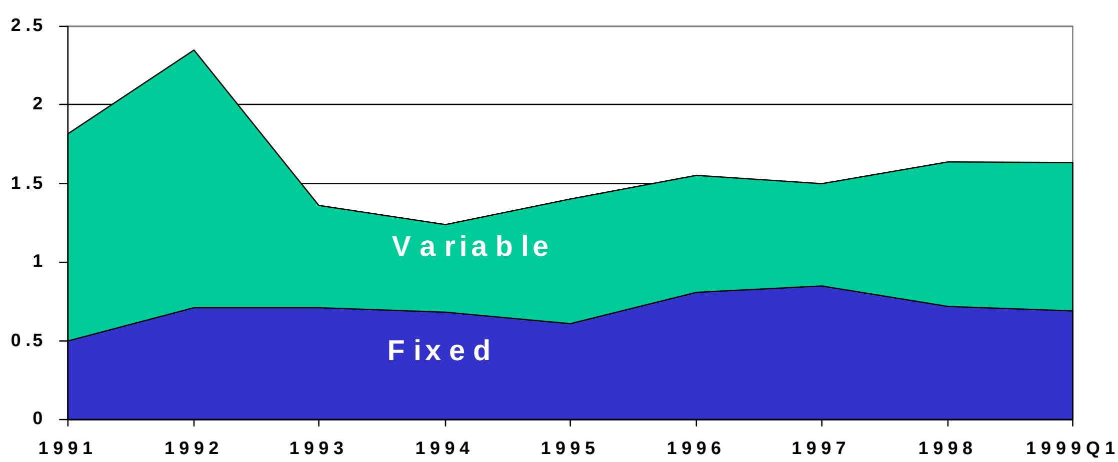
Home Purchase vs. Refinancing Mortgages

(Source: MIC, Percent Seriously Delinquent, All Loans)



Fixed Vs. Variable Rate Mortgages

(Source: MIC, Percent Seriously Delinquent, All Loans)



Mortgage Market Trends

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Data Appendix

National and Regional Trends in Mortgage Delinquency Rates

For the Quarter ending:

June 30, 1999

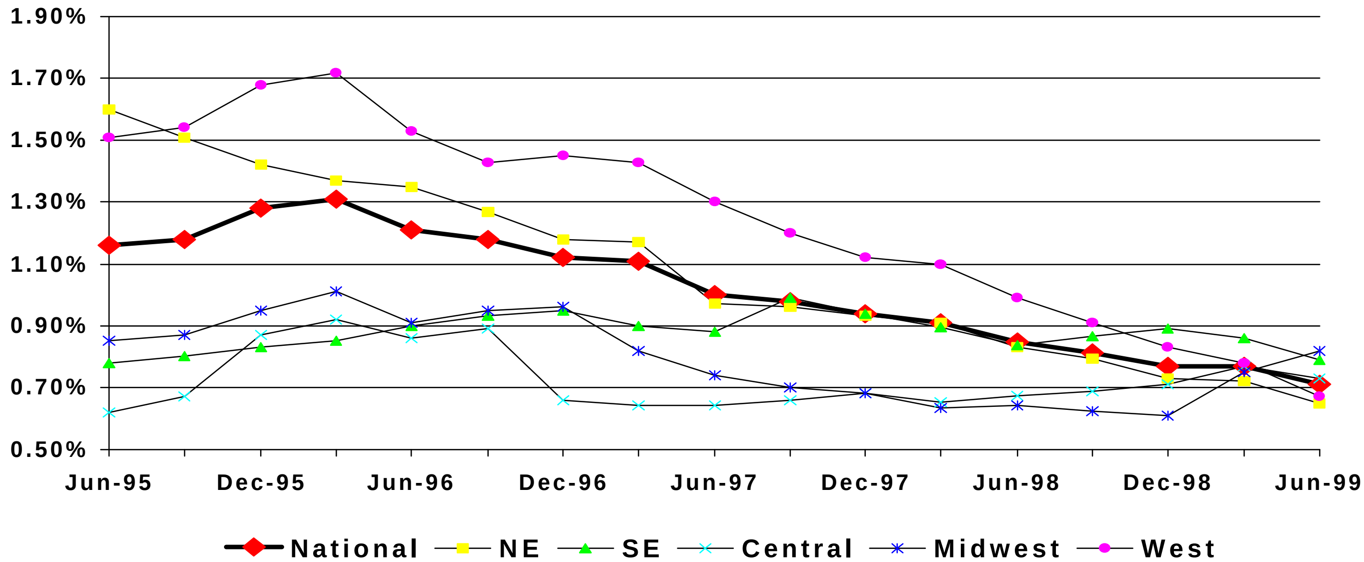
Regional and State Analysis

Seriously Delinquent & Home Price Appreciation Rates as of 6/30/99

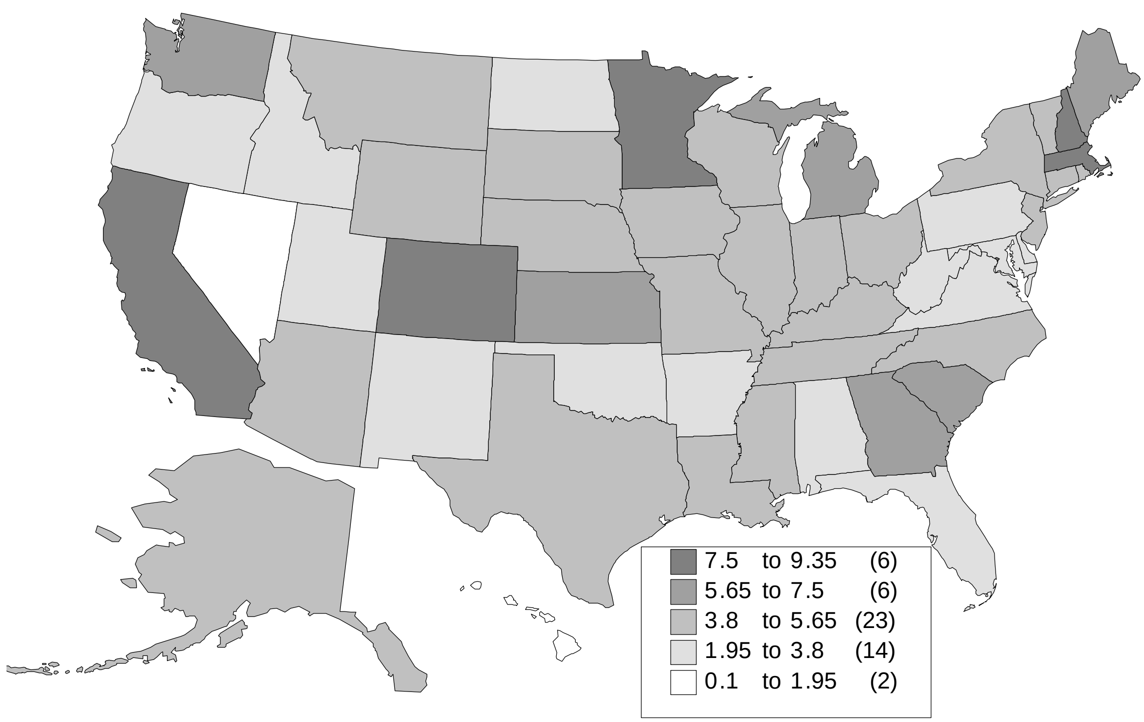
(Based on $)

	MIC SD		TFR SD	Home Price Appreciation	
	Market	Depositories	TFR	1-Year	5-Year
National	**0.74**	**1.03**	**0.71**	5.3	21.9
Northeast	**0.96**	**1.38**	**0.65**		
Connecticut	0.74	0.96	0.47	5.08	11.56
Delaware	0.82	1.44	0.51	3.46	10.73
Maine	0.62	0.99	0.81	5.95	18.12
Massachusetts	0.40	0.56	0.36	9.35	28.82
New Hampshire	0.30	0.47	0.47	8.11	22.90
New Jersey	1.29	2.05	1.11	4.66	12.77
New York	1.28	1.59	0.59	5.46	13.23
Pennsylvania	0.95	1.54	0.66	2.88	11.11
Rhode Island	0.57	0.75	1.39	3.86	9.65
Vermont	0.33	0.68	0.76	4.24	9.85
West Virginia	0.53	1.60	0.98	3.25	22.51
Southeast	**0.93**	**1.39**	**0.79**		
Alabama	0.62	1.44	1.04	3.11	22.54
DC	1.49	1.84	2.91	8.34	16.11
Florida	1.09	1.37	0.65	3.74	18.27
Georgia	0.76	1.22	0.82	6.85	29.80
Maryland	1.57	2.33	2.31	3.18	9.46
North Carolina	0.54	0.97	0.39	4.56	27.09
Puerto Rico	0.67	8.79			
South Carolina	0.61	1.04	0.44	5.87	26.64
Virginia	0.66	0.98	0.32	3.66	12.88
Central	**0.58**	**1.08**	**0.73**		
Illinois	0.82	1.16	0.73	4.00	18.62
Indiana	0.69	1.28	0.84	4.16	25.47
Kentucky	0.47	0.97	0.86	4.74	25.47
Michigan	0.22	0.40	1.06	6.54	41.40
Ohio	0.62	1.28	0.56	5.28	26.13
Tennessee	0.88	1.82	0.73	4.12	28.66
Wisconsin	0.27	0.60	0.30	5.28	26.84
Midwest	**0.50**	**0.85**	**0.82**		
Arkansas	0.84	1.46	4.61	3.58	19.90
Colorado	0.29	0.45	0.14	8.02	37.39
Iowa	0.21	0.33	0.34	4.46	25.13
Kansas	0.40	0.68	0.28	5.65	27.41
Louisiana	0.90	1.57	0.33	4.45	25.83
Minnesota	0.28	0.43	0.27	8.08	31.09
Mississippi	0.67	1.95	1.24	5.11	27.07
Missouri	0.40	0.71	0.38	5.29	23.94
Nebraska	0.19	0.26	0.69	5.38	28.03
New Mexico	0.76	1.07	0.74	3.49	19.30
North Dakota	0.28	0.47	0.39	3.64	20.22
Oklahoma	0.68	1.17	0.17	3.64	19.43
South Dakota	0.40	0.63	0.38	4.90	24.58
Texas	0.68	1.08	1.24	5.03	16.76
West	**0.70**	**0.76**	**0.67**		
Alaska	0.40	0.87	0.05	4.57	20.22
Arizona	0.51	0.67	0.48	4.93	28.42
California	0.73	0.77	0.74	7.68	17.19
Hawaii	1.73	2.51	1.68	0.10	-10.54
Idaho	0.63	0.76	0.07	3.05	19.77
Montana	0.58	1.10	0.32	5.04	25.71
Nevada	1.11	1.24	1.06	1.58	13.95
Oregon	0.36	0.36	0.19	3.59	37.17
Utah	0.64	0.88	1.15	3.29	41.45
Washington	0.50	0.50	0.23	6.10	25.84
Wyoming	0.40	0.57	0.26	3.88	26.84

OTS Regions
Seriously Delinquent Mortgages (%)
Based on Thrift TFR Data by Location of Headquarters

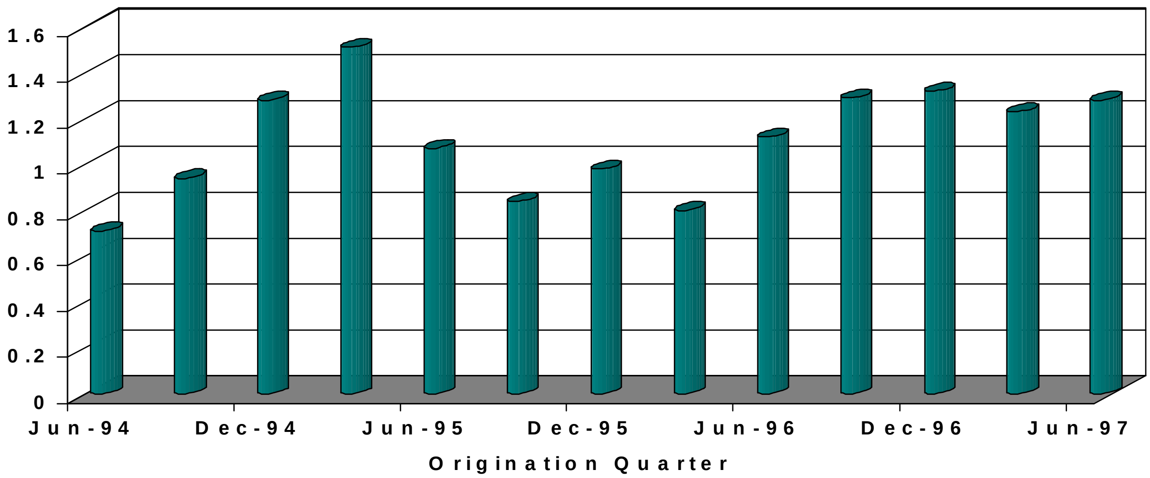


Percent Home Price Appreciation
1998Q2 to 1999Q2
(Source: OFHEO Resale Database)



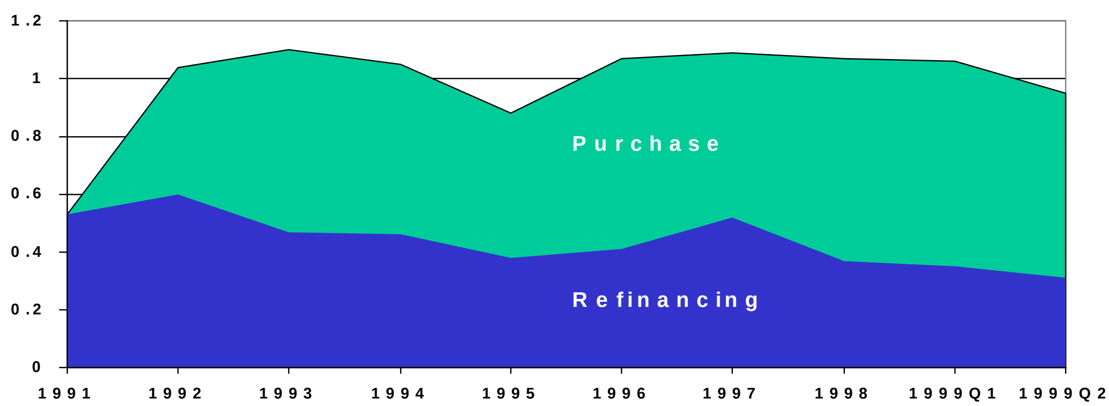
National Cohort Performance by Quarter of Origination

(Source: MIC, Percent Seriously Delinquent after 24 Months, All Loans)



Home Purchase vs. Refinancing Mortgages

(Source: MIC, Percent Seriously Delinquent, All Loans)



Fixed Vs. Variable Rate Mortgages

(Source: MIC, Percent Seriously Delinquent, All Loans)